

000176 1,0

Work Order ID 133688

Tuesday, June 16, 2015 10:35:15 AM

133688

Page 1

Item ID: D3447-5

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Clevis

Start Date: 6/16/2015 Start Qty: 8.00

8

Cust Item ID:

Required Date: 6/16/2015 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan: MCS Date: JUN 16 2015 Tooling: _____ Date: _____

Run

Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3447	Rev A
-------	-------

100

0.00

100

DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

Turn as per Folio AA & Dwg B67-43001Dwg Rev: A

9

0

JFL 2015-06-19

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

9

0

JFL 2015-06-19

120

CONVENTIONAL MILLING MACHINE

0.00

120

Mill Conv

Memo

0.00

Conventional Milling Machine

Drill as per Dwg D3447Deburr

8

J.C.L. 15/06/14

PTO →

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: ~~RAH~~ Date: 15/07/28Work Order update only ☐

Work Order: <u>133 688</u> Part No. <u>03447-5</u> NCR No. <u>15-5230</u>	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☒</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Description Work Order Deviation		Disposition																																																																			
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Work Order ID 133688

Tuesday, June 16, 2015 10:35:15 AM

133688

Page 2

Item ID: D3447-5

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Clevis

Stop

NS2

Start Date: 6/16/2015 Start Qty: 8.00

8

Cust Item ID:

Required Date: 6/16/2015 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC2- Inspect parts off machine FAI/FAIB

0.00

130

QC

Memo

0.00

Quality Control

(8)

J.C.L 15/06/24

140

QC8- Inspect parts - second check

0.00

140

QC

Memo

0.00

Quality Control

(8)

150205

PD

150

Chemical Conversion Coat per QSI005 4.1

0.00

150

HandFinish

Memo

0.00

Hand Finishing

N/A
DAS
9
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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OTHER :																					

Work Order ID 133688

Tuesday, June 16, 2015 10:35:15 AM

1.33688

Page 3

Item ID: D3447-5 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Clevis
 Start Date: 6/16/2015 Start Qty: 8.00 ***8*** Cust Item ID:
 Required Date: 6/16/2015 Req'd Qty: 8.00 ***8*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* Powdercoat Powder Coating	Green Sandtex(Ref:4.3.5.8) per QSI005 4.3 <i>M 11/277.</i> Memo Mask 0.875" round section TEMPERATURE: <i>320</i> START TIME: <i>10:25</i> OVEN FINISH TIME: <i>10:55</i>	0.00 0.00				<i>8</i>	<i>15-7-23</i>	<i>2 3 8</i>	
170 *170* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				<i>(8)</i>			<i>DAS</i> <i>38</i> <i>9-89</i> <i>JUL 23 2015</i>
180 *180* Packaging Packaging	Identify as per dwg & Stock Location: <i>M6772</i> Memo	0.00 0.00				<i>(8)</i>	<i>JA</i>	<i>JUL 24 2015</i>	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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LOA ☐	Product Improvement ☐																																																																			
Substation ☐	Process Improvement ☐																																																																			
Past Expiry Date ☐	Manufacturing Process ☐																																																																			
Misidentified ☐	Past Due ☐																																																																			
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																	
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																	
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																	
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																	
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																	
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																	
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																	
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																	
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																	
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																	
OTHER :																																																																				

Work Order ID 133688

Tuesday, June 16, 2015 10:35:15 AM

133688

Page 4

Item ID: D3447-5 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Clevis
Start Date: 6/16/2015 Start Qty: 8.00 ***8*** Cust Item ID:
Required Date: 6/16/2015 Req'd Qty: 8.00 ***8*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

SJA 20150724

MCS JUL 2 4 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

Tuesday, June 16, 2015 10:35:19 AM

Page 1

Work Order ID: 133688

133688

Parent Item: D3447-5

D3447-5

Parent Item Name: Clevis

Start Date: 6/16/2015

Required Date: 6/16/2015

Start Qty: 8.00

Required Qty: 8.00

Comments:

AA05.08.26New issueKJ/JLM

IPP Rev:B Now on Doosan Lathe 08-06-25 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6R1.000		Purchased	No			100	f	18.4000	0.3167	3			

M6061T6R1 000

ROUND BAR 1.00"

Location

Loc Qty

Loc Code

MAT

6.4

→ m131653

6.4

MAT012

12

m132320

12

3.4 # JFL 2015-06-19

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

DART AEROSPACE LTD		Work Order: 133688
Description: Clevis		Part Number: D3447-5
Inspection Dwg: D3447	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.78	+/-0.030	3.770	✓			
2.500	+/-0.010	2.500	✓			
Ø0.859	+0.000/-0.005	0.8575	✓			
10°	+/-0.5°	10°	✓		Digital angle Gauge	CNC - 17
0.380	+/-0.010	0.375	✓			
0.190	+/-0.010	0.1875	✓			
0.442	+/-0.010	0.441	✓		Caliper	JCL-09
R0.50	+/-0.030	R0.500	✓			
0.125	+/-0.010	0.123	✓			
0.350	+/-0.010	0.345	✓		Caliper	JCL-08
Ø0.250	+0.005/-0.001	0.250	✓		"	
10°	+/-0.5°	9.6°	✓		Digital angle Gauge	CNC - 17
2.063	+/-0.010	2.064	✓			
Ø0.250	+0.005/-0.001	0.252	✓			
1.00	+/-0.030	0.9925	✓			

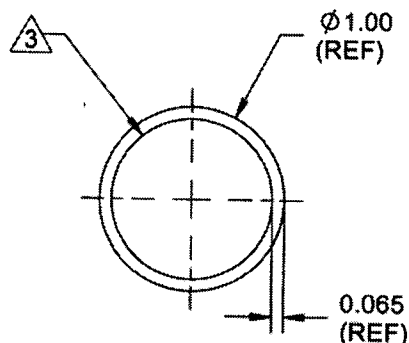
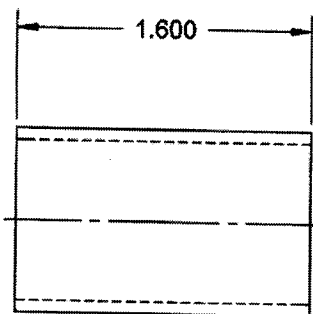
Measured by: JFC/S.C.L.	Audited by: DAS 9 9-89	Prototype Approval:	N/A
Date: 2015-06-19/15/06/14	Date: 15-07-27	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	08.07.24	New Issue	KJ/DD	



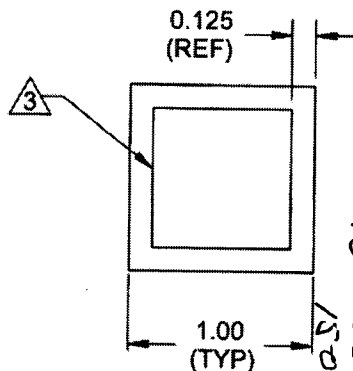
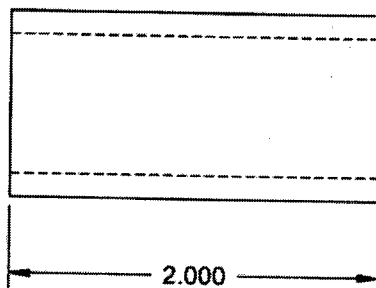
DESIGN 3	DRAWN BY 3	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 3	APPROVED 3	DRAWING NO. D3447	REV. A SHEET 1 OF 4
DATE 05.07.19		TITLE BLADE FOLD KIT PARTS SCALE 1:1	
A	05.07.19	NEW ISSUE	

RELEASED
05/08/18



D3447-1 ROUND SPACER

- 1) MATERIAL: 6061-T6 OR 6061-T62 TUBING PER WW-T-700/6 OR AMS 4080 OR AMS 4082 OR QQ-A-200/8 OR QQ-A-225/8 (REF. DART SPEC. M6061T6T1.000W.065)



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WITHOUT NOTICE
WORK ORDER
NO. 133688445
1506-16

D3447-3 SQUARE SPACER

- 1) MATERIAL: 6061-T6 (OR 6061-T651/ T6510/ T6511/ T62) SQUARE TUBING PER AMS-QQ-A-225/8 (OR AMS 4117/ 4128/ 4115/ 4116) OR PER AMS-QQ-200/8 (OR AMS 4160) (REF. DART SPEC. M6061T6TS1.000W.125)

NOTES:

- CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- MASK INSIDE OF TUBING BEFORE PAINTING.
- FINISH: POWDER COAT PAINT GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- ALL DIMENSIONS ARE IN INCHES
- BREAK ALL SHARP EDGES 0.005 TO 0.010

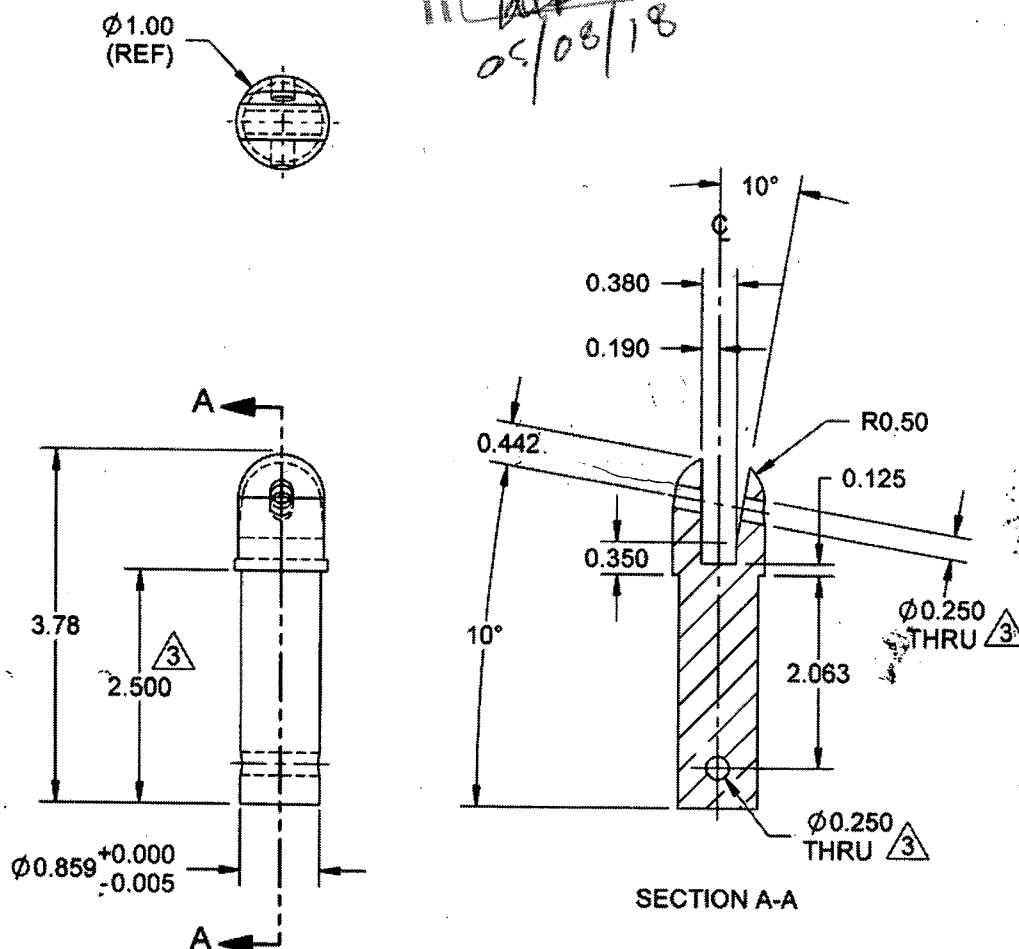
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DART

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3447	REV. A SHEET 2 OF 4
DATE 05.07.19		TITLE BLADE FOLD KIT PARTS	SCALE 1:2

RELEASED
05/08/18

**D3447-5 CLEVIS****SUPERSEDES PREMIER P/N B67-43001-99****NOTES:**

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T652) ROUND BAR
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6R1.000)
- 2) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) MASK AND COVER INSIDE HOLES AS SHOWN PRIOR PAINTING
- 4) FINISH: POWDER COAT PAINT GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) BREAK ALL SHARP EDGES 0.005 TO 0.010

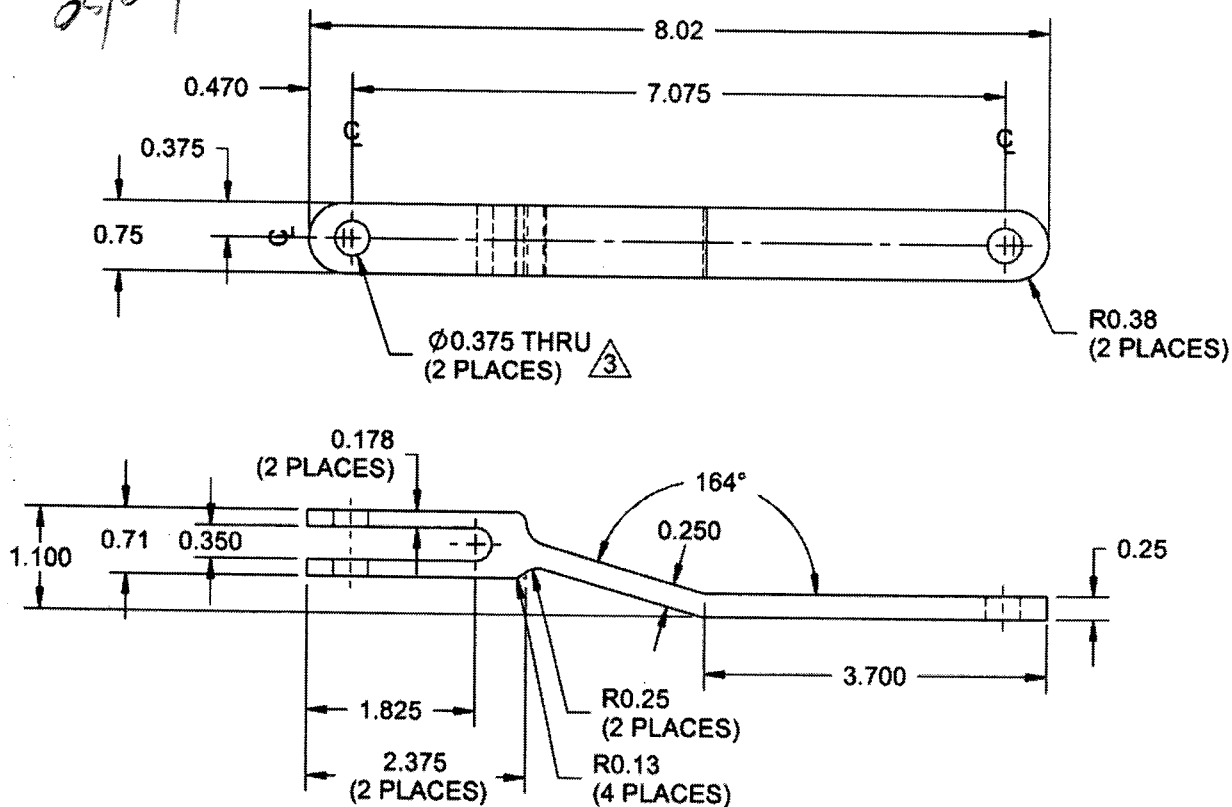
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DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3447	REV. A SHEET 4 OF 4
DATE 05.07.19		TITLE BLADE FOLD KIT PARTS	SCALE 1:2

RELEASED
[Signature]
05/08/18



D3447-9 SWING ARM
SUPERSEDES PREMIER P/N B67-43001-263

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T652) ROUND BAR
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B)
- 2) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) COVER INSIDE HOLES PRIOR PAINTING
- 4) FINISH: POWDER COAT PAINT GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) BREAK ALL SHARP EDGES 0.005 TO 0.010

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